

Fig. 1

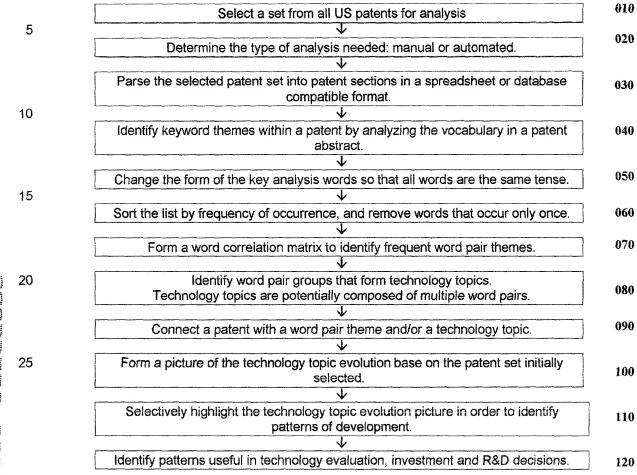


Fig. 2

#### **Abstract Word Correlation Matrix**

	laundry	detergent	odor*	granul*	agricultur*	pesticid*	herbic*	insect*
laundry	0	69	7	63	0	0	0	0
detergent	69	0	11	83	1	0	0	0
odor*	7	11	0	2	0	0	4	3
granul*	63	83	2	0	8	3	11	1
agricultur*	0	1	0	8	0	0	8	0
pesticid*	0	0	0	3	0	0	0	1
herbic*	0	0	4	11	8	0	0	2
insect*	0	0	3	1	0	1	2	0

Fig. 3a Expert opinion

Laundry Technology Topic Agriculture Technology Topic

Fig. 3b
Word
correlation
analysis result

Second Technology Topics acid carbonate all compositions bleach detergent compositions dry fabric containing detergent granular dry laundry free process granular water laundry product silicate surfactant

water

agents amine growth formulation herbicidal formulations liquid glyphosate particles granules plant growth water herbicidal oxide plant powder powders regulant saits water

Sheet 4 of 10

# **Technology Evolution**

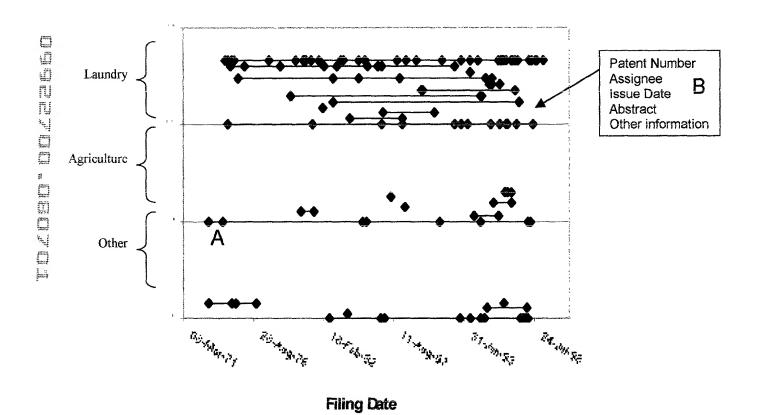
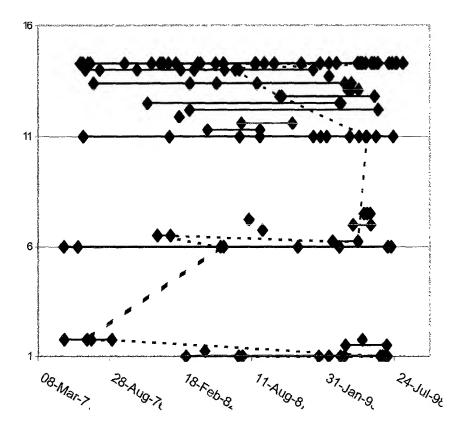


Fig. 4

# **Technology Evolution**



Filing Date

Fig. 5

i i i i

### Sheet 6 of 10

Select a set from all US patents for analysis
<u> </u>
Determine the type of analysis needed: manual or automated.
Parse the selected patent set into patent sections in a spreadsheet or database compatible format.
<b>V</b>
Identify technical references for use in co-citation analysis.
<b>V</b>
Form an artificial journal reference for each scientific journal article in Other References.
↓
Identify journal connections within the selected set of patents using co-citation analysis and Other References.
<b>V</b>
Identify patent groups from co-citation clusters that contain similar scientific themes.
<b>↓</b>
Form a picture of the technology topic evolution base on the patent set initially selected.
<b>V</b>
Selectively highlight the technology topic evolution picture in order to identify patterns of development.
Ψ
Identify patterns useful in technology evaluation, investment an R&D decisions.

Fig. 6

7a

### Patenting Statistics: An Indicator of Technology Status

Pattern	Biotechnology	Laundry Detergent	Cosmetics/Perfume	Wells, Drilling
Abstract	13	0	6	1
Book	74	10	10	8
Brochure	7	17	12	2
Government	2	0	1	0
Journal	650	9	80	23
Newspaper	60	0	0	0
Other	4	17	0	0
Patent	1	9	1	3
TOTAL	811	62	110	37
Number of Patents	13	10	11	11
Journal Refs/Patent	62.4	6.2	10	3.4

7b	Categorization & Identification Accuracy					
	Run 2	Category	Ref.			
	ОК	99.12%	98.25%			

Fig. 7

### Sheet 8 of 10

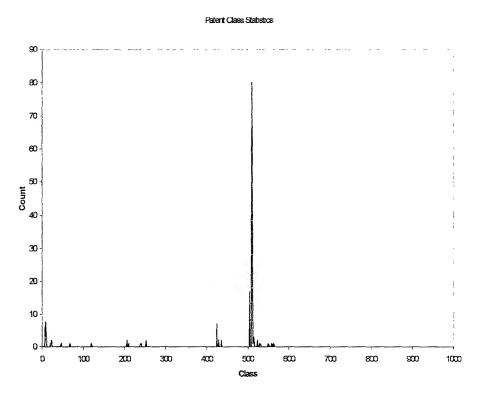


Fig. 8

## Sheet 9 of 10

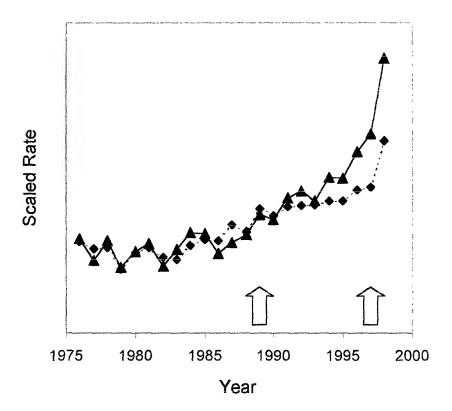


Fig. 9

## Sheet 10 of 10

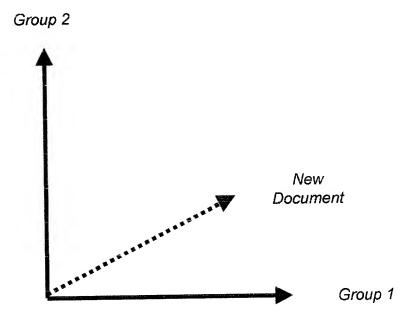


Fig. 10